

**AMENDMENTS TO THE SPECIFICATION**

- Please replace the abstract in the specification with the following amended paragraph:

Two previously undescribed human cdc25 genes, designated cdc25 A and cdc25 B, which have been shown to have an endogenous tyrosine phosphatase activity that can be specifically activated by B-type cyclin, in the complete absence of cdc2 are described. As a result of this work, new approaches to regulating the cell cycle in eukaryotic cells and, particularly, to regulating the activity of tyrosine specific phosphatases which play a key role in the cell cycle are available. Applicant's invention relates to methods of regulating the cell cycle and, specifically, to regulating activation of cdc2-kinase, through alteration of the activity and/or levels of tyrosine phosphatases or through alteration of the interaction of components of MPF. More specifically, the invention relates to inhibiting transcription or translation of mammalian CDC25A genes using oligonucleotides. ~~The present invention also relates to agents or compositions useful in the method of regulating (inhibiting or enhancing) the cell cycle. Such agents or compositions can be inhibitors (such as low molecular weight peptides or compounds, either organic or inorganic) of the catalytic activity of tyrosine specific PTPases (particularly cdc25), blocking agents which interfere with interaction or binding of the tyrosine specific PTPase with cyclin or the cyclin/cdc2 complex, or agents which interfere directly with the catalytic activity of the PTPases. The invention also pertains to an assay for identifying agents which after stimulation of kinase activity of pre-MPF and thus alter activation of MPF and entry into mitosis. Such agents are also the subject of this invention.~~